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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/583,680

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EXAMINER

HANRAHAN, JOSEPH M.J.

ART UNIT

PAPER NUMBER

1794

NOTIFICATION DATE

DELIVERY MODE

09/18/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentgroupus@unilever.com

Office Action Summary	Application No. 10/583,680	Applicant(s) BOUWENS ET AL.	
	Examiner JOSEPH M.J. HANRAHAN	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/2/09.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Specification

1. Applicant's abstract does not conform to proper US practice. Correction is required.
2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

3. Claim 10 is objected to because of the following informalities: the phrase "and or" is used. This appears to be a typographical error of "and/or." Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 10 recites that the food product further comprises bread and is not covered by the edible barrier. However, in Claim 1 the method is for reducing water and/or flavor migration from ingredients of a food product by applying an edible barrier to the said ingredients. Therefore, it is unclear by the language of these claims what the applicant considers being an ingredient and thus covered by the edible barrier.
6. Claim 11 recites the limitation "the leaking ingredient." There is insufficient antecedent basis for this limitation in the claim. However, it appears that Claim 11 is actually intended to depend from Claim 10 and that "claim 9" is a typographical error. Therefore, the examiner has interpreted this claim as depending upon Claim 10.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. **Claims 1, 2, 5, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Fitchett (US PG Pub 2002/0028197).**

9. Fitchett teaches an edible moisture barrier (¶¶ 75, 77) wherein a sugar beet pectin is at least partly oxidized by peroxidase (considered an enzyme) after applying it to the food product (¶¶ 15, 17, 18, 71, and 75; the ungelled composition can be sprayed onto the surface of the substrate which, according to ¶ 75 could be a food such as pickles (considered a leaking ingredient in accordance with the examples given in applicants specification at Pg. 2, Lines 3-5), after which the gel is formed by an oxidation reaction).

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. **Claims 4, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fitchett as applied to Claim 1 and further in view of Mayfield (US Pat. No. 6165521).**

12. **It is noted that the rejection of Claims 10 and 11 necessitated the new ground of rejection and the new ground also applies to Claim 4.**

13. Regarding Claim 4, Fitchett teaches the limitations of the parent claim as described above with reference to Claim 1 but does not teach that the edible barrier has a thickness of 2 to 1,500 microns. However, Mayfield teaches an edible barrier for use

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with moist food products to be used in food products such as sandwiches (Abs.).

Mayfield further discloses that the film should be less than 1mm thick (Col. 4, Line 27).

When the range of a reference overlaps with the claimed range, the claimed range is prima facie obvious. As such, it would have been obvious to a person of ordinary skill in the art to have made an edible barrier as in Fitchett with a thickness as disclosed in Mayfield since Mayfield shows that edible films with a thickness of less than 1mm are suitable for use with moist food products.

14. Regarding Claims 10 and 11, Fitchett teaches the limitations of the parent claims as described above with reference to Claims 1 and 7 but does not teach that the food product comprises bread that is not covered by the edible barrier and that the edible barrier reduces transfer of moisture from the leaking ingredient to the bread. However, Mayfield teaches an edible barrier made of pectin (Col. 4, Line 17) for use with moist food products to be used in food products such as sandwiches (Abs.). The edible film disclosed therein, is used with a leaking a leaking ingredient such as a tomato and provides a moisture barrier to prevent sogginess (Col. 9, Lines 8-35). It would have been obvious to a person of ordinary skill in the art to have used the moisture barrier of Fitchett as a barrier between leaking ingredients and bread as disclosed in Mayfield since Mayfield shows the effectiveness of pectin gels in creating moisture barriers in sandwiches.

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15. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fitchett as applied to claim 1, above, in view of Krochta (US Pat No. 5,019,403) and further in view of Rombouts (US Pat. No. 4,672,034).

16. Fitchett does not teach that the oxidation is carried out in situ by an enzyme or enzymatic system which is present in (endogenous) the food product.

17. Krochta teaches creating an edible barrier on the surface of high moisture substrates (Col. 4, Lines 1-26) wherein the coating interacts with the substrate to create the moisture barrier (Col. 6, Lines 10-30).

18. Rombouts teaches the formation of a gel by oxidative crosslinking of sugar beet pectin (Col. 2, Lines 11-23) and that the peroxidase may be of vegetable origin. The person of ordinary skill in the art would also readily appreciate that the peroxidase is found in a wide variety of vegetables including tomatos and pickles and that peroxidase would be endogenously present in the vegetable (Col. 3, Line 14).

19. Given the teachings Fitchett, Krochta, and Rombouts it would have been obvious to a person skilled in the art at the time of invention to have modified the substrate-surface gel formation of Fitchett with the substrate interaction of Krochta and the vegetable enzyme source of Rombouts. The combination of these teachings would lead the person of ordinary skill inn the art to arrive at an edible barrier made from beet pectin that is applied to a vegetable substrate and thereafter interacts with the substrate to undergo oxidation catalyzed by the peroxidase found therein (endogenously present). The teachings of these references all relate to edible gels or barriers and would have been known to one of ordinary skill. The motivation to combine these teachings would

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have been to create an edible moisture barrier on the surface of a foodstuff (Krochta Col. 6, Lines 60-65).

20. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fitchett in view of Rombouts (US Pat. No. 4672034).

21. Fitchett teaches the limitations of the parent claim as described above with reference to Claim 1 but does not teach that the hydrogen peroxide is not generated in situ. Rombouts teaches the formation of hemicellulosic gels from sugar beet pectin wherein hydrogen peroxide is not provided in situ (Col. 2, Lines 51-59). It would have been obvious to a person of ordinary skill in the art to have provided hydrogen peroxide not in situ since hydrogen peroxide is necessary to the formation of the pectin gels via oxidative gelation (crosslinking) as taught in Fitchett (¶¶ 31-35) and Rombouts teaches that externally supplied hydrogen peroxide will also promote oxidative gelation (crosslinking). The person of ordinary skill in the art would have appreciated that the pectin gels taught in Fitchett could be made with hydrogen peroxide supplied externally as well as in situ.

Response to Arguments

22. Applicant argues that Fitchett does not directly and unambiguously teach the method of reducing water and/or flavor migration. The reference does not have to recite the exact wording of the claim language but is required to teach the product claims or steps taught. In this case, the Fitchett reference teaches a gel of pectin as described that is taught as having use as a coating or glaze or food dressing for foods such as pickles as well as an edible adhesive or glaze for foods. Fitchett specifically refers to

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their use as moisture barriers and that they are edible (see paragraph 77). The step of "partially oxidized after applying" is considered met by the reference because the pectin material of Fitchett is at least partially oxidized due to the presence of the enzymes (peroxidases). The step of applying the pectin material to a food is considered met with these teachings. The formation of a barrier is considered to be inherent to the formation of the material on the food itself given that the material taught is a pectin and that which is claimed is a pectin. The partial oxidation is also considered inherent as stated above due to the presence of the enzymes. Therefore, given these teachings of Fitchett, the reference is considered to meet the limitations of the steps outlined in the instant claims.

23. Applicants argue that Fitchett does not disclose a leaking ingredient such as tomato slices. The examiner disagrees. A pickle is considered a leaking ingredient as discussed above. The claim is not limited to tomato slices and it is readily known that pickles leak water due to their high aqueous content.

24. Applicants argue with respect to claim 4 that it would not have been obvious to have made a barrier in the thickness claimed. The examiner disagrees. The range would have been obvious to a person of ordinary skill in the art as discussed in the reference above.

Applicant's arguments with regard to Claim 6 have been considered but are not persuasive. The peroxidase of vegetable origin taught in Rombouts is horseradish peroxidase which is the same peroxidase taught in the gel system of Fitchett (¶ 22). The person of ordinary skill in the art would have known that horseradish peroxidase is naturally available in the vegetable itself (endogenously present in the vegetable) and

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not only the sources mentioned in Rombouts. Furthermore, the person of ordinary skill in the art would also realize that peroxidases are available in a number of vegetables. The gel system of Fitchett needs peroxidase and Rombouts clearly teaches that it may be of vegetable origin.

Conclusion

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. In particular, the rejection of claims 10 and 11 necessitated the new ground of rejection and the new ground also applies to claim 4.

27. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSEPH M.J. HANRAHAN whose telephone number is (571) 270-7060. The examiner can normally be reached on M-F from 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOSEPH M.J. HANRAHAN/
Examiner, Art Unit 1794

/JENNIFER MCNEIL/
Supervisory Patent Examiner, Art Unit 1794